IT IS CLAIMED:

1. A liposome composition for use in localizing a compound in a solid tumor via the bloodstream comprising,

liposomes (i) composed of vesicle-forming lipids and between 1-20 mole percent of an amphipathic vesicle-forming lipid derivatized with a hydrophilic polymer, and (ii) having a selected mean particle diameter in the size range between about 0.07-0.12 microns, and

the compound in liposome-entrapped form.

2. The composition of claim 1, wherein the hydrophilic polymer is polyethyleneglycol having a molecular weight between about 1,000-5,000 daltons.

3. The composition of claim 2, wherein the hydrophilic polymer is selected from the group of polylactic acid, polyglycolic acid, and copolymers thereof.

4. The composition of claim 1, wherein the compound is an anti-tumor agent, and at least about 80% of the compound is in liposome-entrapped form.

5. The composition of claim 4, wherein the anti-tumor agent is an anthracycline antibiotic, and the concentration of compound which is entrapped in the liposomes is greater than 50 μg compound/μmole liposome lipid.

6. The composition of claim 4, wherein the anthracycline is selected from the group consisting of doxorubicin, epirubicin, and daunorubicin, including pharmacologically acceptable salts and acids thereof.

7. A liposome composition for use in localizing an anthracycline anti-tumor drug in a solid tumor via the bloodstream comprising,

liposomes (i) composed of vesicle-forming lipids and between 1-20 mole percent of an amphipathic vesicle-forming lipid derivatized with polyethyleneglycol, and (ii) having an average size in a selected size range between about 0.07-0.12 microns, and

the drug, at least about 80% in liposome-entrapped form, and having a concentration in the liposomes is greater than 50 μg agent/μmole liposome lipid.

8. The composition of claim 7, wherein the drug is selected from the group consisting of doxorubicin, epirubicin, and daunorubicin, including pharmacologically acceptable salts and acids thereof.

9. For use in localizing a compound in a solid tumor by IV administration of the agent, a liposome composition characterized by:

(a) liposomes composed of vesicle-forming lipids and between 1-20 mole percent of an amphipathic vesicle-forming lipid derivatized with a hydrophilic polymer,

(b) a blood lifetime, as measured by the percent of a liposomal marker present in the blood 24 hours after intravenous administration which is several times greater than that of liposomes in the absence of the derivatized lipids;

(c) an average liposome size in a selected size range between about 0.07-0.12 microns, and

(d) the compound in liposome-entrapped form.

10. The composition of claim 9, wherein the hydrophilic polymer is polyethyleneglycol having a molecular weight between about 1,000-5,000 daltons.

11. The composition of claim 9, for use in treating such tumor, wherein the compound is an anthracycline antibiotic, and the concentration of compound entrapped in the liposomes is greater than about 50 μg compound/μmole liposome lipid.

12. The composition of claim 11, wherein the anthracycline is selected from the group consisting of doxorubicin, epirubicin, and daunorubicin, including pharmacologically acceptable salts and acids thereof.

13. For use in treating a solid tumor by intravenous administration of an anthracycline antibiotic drug, a liposome composition characterized by:

(a) liposomes composed of vesicle-forming lipids and between 1-20 mole percent of an amphipathic vesicle-forming lipid derivatized with a polyethyleneglycol,

(b) a blood lifetime, as measured by the percent of a liposomal marker present in the blood 24 hours after IV administration which is several times greater than that of liposomes in the absence of the derivatized lipids;

(c) an average liposome size in a selected size range between about 0.07-0.12 microns,

(d) at least about 80% of the drug in liposome-entrapped form, and

(c) a concentration of drug in the liposomes of at least about 50 μg drug/μmole lipid.

14. A method of preparing an agent for localization in a solid tumor, when the agent is administered by IV injection, comprising

entrapping the agent in liposomes which are characterized by:

(a) a composition which includes between 1-20 mole percent of an amphipathic vesicle-forming lipid derivatized with a hydrophilic polymer, and

(b) an average liposome size in a selected size range between about 0.07-0.12 microns.

15. The method of claim 14, wherein the agent is an anthracycline antibiotic drug, and said entrapping includes loading the agent into preformed liposomes by remote loading across an ion or pH gradient, to a final concentration of liposome-entrapped material of greater than about 50 μg agent/μmole liposome lipid.

16. The method of claim 15, wherein the drug is selected from the group consisting of doxorubicin, epirubicin, and daunorubicin, including pharmacologically acceptable salts and acids thereof.

17. A method of localizing a compound in a solid tumor in a subject comprising,

preparing a composition of liposomes (i) composed of vesicle-forming lipids and between 1-20 mole percent of an amphipathic vesicle-forming lipid derivatized with a hydrophilic polymer, (ii) having an average size in a selected size range between about 0.07-0.12 microns, and (iii) containing the compound in liposome-entrapped form, and

injecting the composition intravenously in the subject in an amount effective to localize a therapeutically effective quantity of the agent in the solid tumor.

18. The method of claim 17, wherein the hydrophilic polymer is polyethyleneglycol having a molecular weight between about 1,000-5,000 daltons.

19. A method of treating a breast or colin carcinoma in a subject with an anthracycline antibiotic drug, comprising comprising

entrapping the drug in liposomes (i) composed of vesicle-forming lipids and between 1-20 mole percent of an amphipathic vesicle-forming lipid derivatized with a hydrophilic polymer, and (ii) having an average size in a selected size range between about 0.07-0.12 microns, at a concentration of entrapped agent of greater than about 50 μg agent/μmole liposome lipid, with at least about 80% of the agent entrapped in the liposomes, and

injecting the composition intravenously in the subject in an amount effective to localize a therapeutically effective quantity of the agent in the carcinoma.

20. The method of claim 19, wherein the hydrophilic polymer is polyethyleneglycol having a molecular weight between about 1,000-5,000 daltons, and the agent is selected from the group consisting of doxorubicin, epirubicin, and daunorubicin, including pharmacologically acceptable salts and acids thereof.